

PATENT

Serial No. 09/817,457

Amendment in Reply to Advisory Action of August 8, 2005

IN THE CLAIMS

Please amend claims 1-5 as follows:

1           1. (Currently Amended) A wireless network comprising a  
2 | plurality of terminals and an assigned central station, ~~which said~~  
3 | network, after receiving requests for the wireless transmission of  
4 | packets between transmitting and receiving terminals, ~~during a time~~  
5 | ~~multiplex frame, assigns time slots within a following time~~  
6 | ~~multiplex frame~~ for the wireless transmission of the packets from  
7 | the transmitting terminal to the receiving terminal, ~~including~~  
8 | ~~steps of~~ wherein said wireless network is configured for:  
9 |       receiving all the requests for wireless transmission by the  
10 | assigned central station;  
11 |       ~~determining~~ determining, from a set of all transmitting  
12 | terminals within the network, a first subset of the set comprising  
13 | those terminals that intend to transmit packets to a plurality of  
14 | receiving terminals, and determining a second subset, which  
15 | includes the remaining terminals of the set of transmitting

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16 terminals, which are not contained in the first subset,  
17 |       determining an order ~~in which~~ where the transmitting terminals  
18 | of the first subset transmit based on a decreasing number of  
19 | receiving terminals assigned to each transmitting terminal therein,  
20 |       subdividing the receiving terminals assigned to each  
21 | transmitting terminal of the first subset into a first group such  
22 | that the first group includes all the receiving terminals already  
23 | assigned to transmitting terminals, and into a second group of  
24 | receiving terminals which includes all the other receiving  
25 | terminals that are assigned to corresponding ones of said  
26 | transmitting terminals, and  
27 |       determining ~~the~~ a receiving order in the two groups of  
28 | receiving terminals in accordance with the transmission order of  
29 | the corresponding transmitting terminal, wherein the receiving  
30 | terminal of the second group receives transmitted packets first  
31 | earlier in time.

1       2. (Currently Amended) A wireless network as set forth in  
/2 | claim 1, wherein the assigned central station determines the

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3 transmission order of the transmitting terminals of the second  
4 subset by first selecting all of the transmitting terminals that  
5 have not previously been either a transmitting or a receiving  
6 terminal, and then selecting all of the transmitting terminals that  
7 have not previously been a receiving terminal, and that wherein the  
8 transmitting terminals of the second subset transmit either before  
9 or after the transmitting terminals of the first subset.

1 3. (Currently Amended) A wireless network as set forth in  
2 claim 1, wherein the assigned central station ~~divides the set of~~  
3 ~~transmitting terminals of the second subset into a transmission~~  
4 ~~order of the first subset such that~~ is configured to select a  
5 transmitting terminal for a current time slot which is not defined  
6 ~~as a transmitting terminal if it was a receiving terminal in the a~~  
7 prior time slot preceding said current time slot, or would be a  
8 ~~receiving terminal in the a~~ next time slot following said current  
9 time slot, the assigned central station being configured to further  
10 select ~~and that a receiving terminal which~~ is not defined as a  
11 ~~transmitting terminal in the preceding prior time slot and the~~

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12 | ~~following next~~ time slot.

1           4. (Currently Amended) A central station included within in a  
2 wireless network comprising a plurality of wireless terminals,  
3 | ~~which said~~ central station, after receiving requests for the  
4 wireless transmission of packets between transmitting and receiving  
5 terminals, ~~during a time multiplex frame, assigns time slots in an~~  
6 ~~order for packet transmission of a following time multiplex frame,~~  
7 ~~wherein after reception of all requests for the wireless~~  
8 ~~transmission of packets by the central station, the central station~~  
9 ~~implements the following steps~~ is configured for:

10           determining a first subset of a set comprising all of the  
11 transmitting terminals in the wireless network, which terminals in  
12 said first subset each intend to transmit packets to a plurality of  
13 receiving terminals,

14           determining a second subset of transmitting terminals  
15 containing a remainder of transmitting terminals of the set not  
16 included in the first subset,

17           determining ~~an a~~ transmission order in which the transmitting  
18 terminals of the first subset transmit, said transmission order

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19 | being determined in accordance with the a decreasing number of  
20 | receiving terminals assigned to a particular transmitting terminal,  
21 | subdividing the receiving terminals assigned to each  
22 | transmitting terminal of the first subset into a first group  
23 | containing all the receiving terminals already used, and into a  
24 | second group which contains all remaining receiving terminals, and  
25 | determining the a receiving order in the first group and the  
26 | second group in accordance with the transmission order as a of the  
27 | corresponding transmitting terminal, wherein the receiving terminal  
28 | of the second group is selected for receiving packets first earlier  
29 | in time.

1 | 5. (Currently Amended) ~~A method for time slot sorting in a~~  
2 | ~~wireless network, comprising the steps of:~~  
3 | ~~determining a first subset from a set of all transmitting~~  
4 | ~~terminals comprising the network, wherein the determining delegates~~  
5 | ~~to the first subset those transmitting terminal that intends to~~  
6 | ~~transmit packets to a plurality of receiving terminals,~~  
7 | ~~determining a second subset from the set of terminals, wherein~~  
8 | ~~the determining delegates all transmitting terminals remaining in~~

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9 ~~the set which have not been delegated to the first subset,~~  
10 ~~defining an order in which the transmitting terminals of the~~  
11 ~~first subset transmit in dependence upon the decreasing number of~~  
12 ~~receiving terminals assigned to each transmitting terminal therein,~~  
13 ~~subdividing the receiving terminals assigned to each~~  
14 ~~transmitting terminal of the first subset into a first group, which~~  
15 ~~first group contains all the receiving terminals designated as~~  
16 ~~transmitting terminals,~~  
17 ~~subdividing the receiving terminals not assigned in the first~~  
18 ~~subset to a second group; and~~  
19 ~~defining a receiving order in the first group and second group~~  
20 ~~in accordance with the transmission order of each respective~~  
21 ~~transmitting terminal, wherein the receiving terminals of the~~  
22 ~~second group receive data first in time~~ A controller for  
23 determining a sequence of transmission of a plurality of  
24 transceivers, said controller being configured to:  
25 receive requests for transmission from said plurality of  
26 transceivers;  
27 form a first transmitting set including first set transmitters  
28 of said plurality of transceivers, each of said first set

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29 transmitters having requested transmission to a plurality of  
30 requested receivers of said plurality of transceivers;  
31 determine a first transmitting terminal of said first set  
32 transmitters to be a first one of said first set transmitters to  
33 transmit, said first transmitting terminal having requested  
34 transmission to a largest number of corresponding receivers of said  
35 plurality of requested receivers.